Abstract

"Snowblog CTnet city" Project is the missing corner stone in technology-enabled education in emerging countries. It offers a mutually empowering new model for collaboration among American university students participating in an academic course on integrating Web 2.0 technologies and university students from China, Ukraine, Gaza and Israel. It is an intercultural collaborative web-based gated social community of learners. Its model is a modern version of apprenticeship based on emergent pedagogy, facilitating tutor guided and peer-assisted creative learning/teaching process overcoming constraints originating from gaps and divides, helping all participants acquire 21st century competences. The project model can be duplicated horizontally - to other universities and vertically - participants tutoring local high-school and life-long learners.

Introduction

The current Snowblog CTnet city Project is based on gained insights from several Snowblog projects implemented in the last seven years among high-school and university students from different cultural communities, across literacy gaps and access and affordability divides. Our first implementations were "bottom up" projects, connecting Israelis (both Jewish and Muslim) and Palestinians using "primitive" communication tools, such as teachers home fax machines and disposable cameras. Along the way, we upgraded our tools, built web-based environments and developed a dialogue model combined with a related pedagogical methodology. Students from a high-achieving country such as Finland, Chinese students from the Chinese Academy of Sciences and others, joined our Snowblog projects. It became a vivid intercultural, gated web-based community of learners. Yet, in order to address some of the challenges of today's education, and expand with larger-scale implementations, there was a need to remodel the project.

Some misconceptions found along the way: In 2003 when Snowblog model was first presented at UNESCO international conference in Finland, our goal was fostering multicultural awareness and empathic dialogs. We were sure that enabling a web-based closed environment, facilitating tutor-assisted social interactions, between elementary school students belonging to different social/cultural backgrounds (then Israeli and Palestinian) engaged in common themes, was enough. In 2007 when presenting our upgraded Snowblog project at MIT LINC conference in Amman, with Israeli, Palestinian and Finnish high school students, we emphasized two core elements that complement the social intercultural aspect: creative higher order thinking and digital literacies – composing what we referred to as the 21st century skills and competences.

In 2010, we would like to present Snowblog CTnet city project, a more "mature" version of the Snowblog series, implemented among university students from the
USA, Ukraine, China, Israel and Gaza. From more than seven years of Snowblog various implementations, we have gained two major insights:

a. Diversity, though acknowledged as the main characteristic trait of nowadays' societies, causes a much more complex dynamics inside functional social communities of learners such as Snowblog, than expected.
b. The development of the 21st century competences is a lab-like process, nurtured in especially designed environments.

Along the years we have learned, as well, that:
1. Top down knowledge delivery by leading experts, integrated in local curriculum by trained local teachers - is not enough for effective learning in intercultural settings, with unprepared students.
2. Authentic real life context for better (intuitive) learning of concepts– is not enough in diverse groups of learners.
3. Access to and mastery of Web.2.0 tools and applications and the integration of participatory technologies in classes - are not enough to ensure the production of better content products.
4. Building social networks and communities of learners – is neither enough to facilitate meaningful intra-group and inter-group interactions, nor the production of collective peer-generated content.

We hope that our current Snowblog Ctnet city project, has become the missing cornerstone in technology-enabled education, involving both developed and emerging countries.

Snowblog Ctnet city – a new learning environment addressing some of the main challenges in today’s education

* A New Context for Learning:
1. Today’s kids have a new digital vernacular. They learn in ways that are different from the ways their parents and teachers had learned.
2. In the 21st century, most students will probably follow a working trajectory that encompasses multiple careers. Therefore, much of what they had learned at school will not be needed. They will have to be able to pick up new skills, outside today’s traditional educational institution.
3. Today's students will need to feel comfortable working in cross-disciplinary and intercultural teams, that encompass multiple ways of knowing.
4. The growing disillusion from the effectiveness of new technology for enhancing education, recognizing that technology by itself is seldom the solution.

* Multimedia Literacy
1. Being literate today, means to be able to communicate effectively using image, text, nonlinear narratives, sound, movement, sequence, and interactivity, all in combination. Such skills are more important today than ever before. The catch is that to be literate today means not only that you can operate and be exposed to new media. Digital youth can hardly express themselves or create meaning, nor can they make a compelling visual argument.
2. Formal education does not pay attention to the fact that part of being digital literate includes the skill of navigation, intuitively finding information on the web. A necessary skill in the context of productive inquiry and facilitating rapid explorations of the vast resources of the web. [2] [3].
In the 2010 Horizon report [9], experts in education emphasize the following crucial challenges:

* to adapt teaching and learning practices to meet the needs of today’s learners, to emphasize critical inquiry and mental flexibility.

* Despite the widespread agreement on its importance, training in digital literacy skills and techniques is rare in any discipline, and especially rare in teacher education programs. This reality is exacerbated by the fact that as technology continues to evolve, digital literacy must necessarily be less about tools and more about ways of thinking and seeing, and of crafting narrative.

* The connection between scholastic achievement and computerization is insignificant, and sometimes the influence of computers is even negative. Prof. Gabi Salomon adds that the use of computers is too often seen as a solution for all the problems of the educational system: It is an illusion. [13].

* Students are writing more than ever before, but the focus of today’s writing is more about instantaneous communication. Today’s understanding of writing is usually operational as opposed to epistemic, more a declaration rather than an exploration.[15].

* The movement towards open content reflects a growing challenge: the need for skills related to finding, evaluating, interpreting resources, repurpose them in support of a learning or specific research objective.[9]. This is especially challenging students from emerging countries.

**Snowblog Ctnet city – implementing some of the experts' recommendations, aimed to meet the challenges**

* The need for new learning models:
We must find a way to reconceptualize parts of the educational system and at the same time, find ways to reinforce learning outside formal schooling, so that these challenges can be met in a cost-effective way.[2] [3].

* As opposed to the traditional concept of knowledge delivery, there is a need to recognize the importance of the social construction of understanding, where experience and information are internalized into actionable knowledge through conversations and social negotiations.[3].

* Fostering studio-based learning environments [3] and all cognitive apprenticeship methodology.[5].

* Highlighting creativity as the most important competence and the notion of diversity as a crucial factor, for strengthening creativity. Striving towards a creative mix of individual talents and experiences among students and staff in higher education.[12].

* Moving from traditional pedagogy to one which asks students to master intellectual and practical skills. Prof. Darling - Hammond recommends to design new models of education, to allow in-depth learning, based on cooperative learning and inquiry-based teaching, involving social and emotional learning. [6].

* More than ever before scientific literacy in the 21st century calls for deep understanding of science topics and for the ability to think about scientific issues in a critical manner. Research findings, however, consistently show that students
encounter considerable difficulties in scientific thinking. This raises the need to search for effective instructional means that would assist students in developing their ability of scientific thinking. Prof. Zohar claims that explicit higher order thinking teaching strategies help both low and high achievers in class.[17] [18]. Prof. Aharoni emphasizes the importance of revealing to students the common core characteristics shared by mathematics and poetics thinking [1].

* A model of learning based on niche communities of practice and co-creation, with core curriculum fostering thinking and competences and minimal knowledge-based curriculum.[3].

**Snowblog CTnet city model**

The project embraces emergent pedagogy. The environment becomes a place for discovery, not only by the students but by tutors, as well. Interaction and dialog are key factors. True understanding as a goal of the educational process is frequently equated with analytic processing. In Snowblog CT net City it is the outcome of a dialogue in a shared effort to generate a common story.[4]. The students, their peers and the tutors are intimately involved in common reflective practice.[4].

Snowblog CTnet city, is based on free web 2.0 tools: for communication, maintaining co-presence through social gatherings, voice threads, etc., for posting texts, photos and videos filmed with mobile phones, enabling each end-user full access and affordability.[14].

It is a modern version of cognitive apprenticeship.[5]. As opposed to the traditional apprenticeship, the tutors identify the processes and explicitly refer to knowledge contexts, helping students form new conceptual understanding and higher order thinking. Teaching becomes reciprocal.( tutor-student, student – other students).

The project is conceptually designed as action research, as well: a form of collective self-reflective enquiry working through three basic phases:

a) building a picture ( hypothesis) and gathering information.

b) defining research question(s).

c) interpreting and evaluating.

In the project practice, action research becomes a collaborative group work.[11].

Another important characteristics echoes difficulties Prof. Grobstein and his colleagues faced when implementing the new emergent pedagogy with teachers / students in a two-week project.: some of them did not cooperate, did not participate in the collective or individual assignments, were afraid to fail, etc.[7]

In our project, we acknowledge that it is a process that takes time. We support participants with social interactions, practice remedial interventions in real-time, and encourage mutual reflective feedback – all in a friendly environment.

The current project is different from previous Snowblog projects in its balance of power among participants. It has a group of participants with technological know-how, American students in an academic course on web technologies and education. They act as a pillar and their contribution strengthens other participants from emerging countries, less familiar with the technology and the English language. That internal synergy helps build a robust cooperation. The American students in return are exposed to intercultural diverse environment. It is mutually empowering.
That project model can be duplicated horizontally (to other universities) and vertically (participants tutoring local high-school and life-long learners). It might be the missing cornerstone, facilitating productive collaboration while overcoming expected constraints with embedded gaps and divides in intercultural settings.

**Final remark:** In order to allow the participation of every end-user, we are using only free web 2.0 applications and programs. For inquiry based documentation we recommend the use of simple mobile phone cameras or basic digital cameras.

**Selective snapshots and citations from Snowblog CT net city site.**

Snowblog CT net city front page

![Snowblog CT net city front page](image)

Part of a page of a student form Gaza

![Part of a page of a student form Gaza](image)

Part of a page of V., a student from Ukraine

![Part of a page of V., a student from Ukraine](image)
I wish it were the street I live in
"

today is the first time I try to write diary in English.
It's a little bit hard for me to express my idea clearly and smoothly in English, while anyway, I will try my best to do that. Maybe my English is some kind of Chinglish, I will appreciate very much if someone can point them out." — C. from China

"That's really cool. You did a good job! I know I couldn't write in another language!" — T. from USA

"Great job! Thank you so much for sharing with us Chen:)" — S., a student from USA

A comment of one of the tutors:

"Dear Chinese students and friends,
We are happy to see you have joined this wonderful project. It's always a pleasure to have you on board of the educational vessel which opens new horizons for international collaborations and intercultural communication as well as sharing beautiful ideas around the world.
Feel at home here and share your pictures with interesting ideas.
Warmly,
N. Associate Professor at National University, Ukraine"

Snowblog Ct net city featured videos documenting urban life

Citations taken from the Forum of Snowblog CT net city site -- answers to the following questions:
1) Do you think that neighborhoods and communities are important elements in life in the city?
2) Did you experience "a sense of community identity" in an urban environment (or in a rural environment)? If yes, please write some examples of its nature. If not, did you miss it?

3) Some people say that current planning of urban areas destroy "neighborhoods" and do not facilitate "the sense of community identity". Do you agree? If yes, please try to explain why? Please suggest some ways to remedy the situation.

S. from USA: "I absolutely agree that neighborhoods and communities are important elements in city life. Although I have never actually lived in a very large city I have spent a great deal of time commuting from my home to New York City. It is very obvious that when people live in a city as large as NYC they do not always have the chances to make meaningful connections with others. Life is so fast paced and there are so many people that pass you by on a regular basis that it is difficult to bond. Neighborhoods and communities are so important because it gives people the opportunity to be a part of something meaningful.

I personally do not feel as though I experienced a real sense of community. Although I grew up in a fairly small city and town of Newburgh I feel as though I missed out on a real community lifestyle. In the city and town of Newburgh there is a variety of different types of communities. There is the usual “city” atmosphere with homes and apartment buildings built close to one another. There is also more of a town atmosphere in which houses are built further apart. The street I grew up on was very secluded and houses are quite a distance from one another, even to this day I don’t know all of my neighbors so I unfortunately don’t feel as though I had much of a community life.

I disagree that the current planning of urban areas destroys “the sense of community identity”. I personally think that the emphasis on work and other focuses of our society has ruined community life. People are not as worried about being friendly with their neighbors and establishing meaningful connections with those around them because they are more worried about other things. Nowadays time has become such a difficult thing to come by. I think that it would be important for people to be reminded about the value of “community” bonds and the many wonderful things that can come from it."

A. from USA: 'I do think neighborhoods and communities are important elements in life in the city. Cities are usually occupied with tons of people. It may be harder to establish a community in these cities because people are always very busy and don't take time out to get to know one another. However, if these people are part of a community they can take a break from their busy lives and get to know each other, whether it be working on the PTO or joining a committee that is important to them. This way these people will know more people than just the people in their inner circles.

A. I do experience a sense of community in my city. My city isn't that large but it is big enough where everyone doesn't know each other. However, people come together in many different ways. One way I know some people get together is by playing bingo at a local place like the YMCA or a church. We also have certain celebrations in the my city where people come together. We have a tree lighting in December in downtown Middletown. We also have certain parades throughout the year. One of the
parades is a firefighter parade, where we celebrate and appreciate all the hard work that they do for us.

I don't think urban areas destroy neighborhoods. If anything I think it creates neighborhoods. It may not be very open, like a cul de sac of houses, but houses close together can still have a sense of community. People can still be close to each other and get to know each other and create a community whether they live in a huge city like NYC or if they live in a small town. I think it all depends on the people and how willing they are to create a community and belong to one.

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L. from China: "I think neighborhoods and communities are important elements in life in the city. If you live in the city for many years while do not know the family which live in front of you, do you think it is ridiculous? The communication makes the human to be a human.

If we live together we will have the chance to do many things together. We are to feel happy either we success or fail. When we success, they applaud together and if we fail we will encourage each other and enjoy the time. We are happy because we are together.

I don’t agree with the opinion that current planning of urban areas destroy "neighborhoods" and do not facilitate "the sense of community identity. There are about 7 billion people live on the earth. We need tall buildings and great mansions to hold so many people. That current planning of urban areas makes that we have more neighborhoods, is that true? The only problem is the communication."

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C from China:" I do think that neighborhoods and communities are important elements in life in the city. Because people will not feel alone when we live in the neighborhood and know each neighbor. And the city will more safe and comfortable to live in that case. And communities will help the government to administrate and provide the public services.

I'm very regretted that I missed "the sense of community identity". Because I was too young when I was living in the country, whereas the community where I moved to later was a new one so that I needed very much time which I couldn't afford to make friends with my neighbors. And when I was familiar with them, I went to the college. As to the current planning of urban areas, I don't think that it is the reason of the loss of "the sense of community identity". I think that the problem is the government's public services. The community officials should take actions to improve the relationship between us. For example, they can hold more public parties or activities in order to improve the communications among the neighbors."

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From a reflective journal of B., an American student:

"There are so many interesting and inspiring people involved in this project! I can't wait to learn even more about them and their communities. It will be interesting when we get to compare and contrast the different issues that face our communities. I have a feeling there may be many similar issues facing our cities despite being in different parts of the world!"
References